

REMARKS

The Applicants have now had an opportunity to carefully consider the comments set forth in the Office Action that was mailed August 14, 2007. All of the rejections are respectfully traversed. Amendment, reexamination and reconsideration of the application are respectfully requested.

The Office Action

In the Office Action that was mailed August 14, 2007:

claims 1, 4, 5, 11, 13, 16, 17 and 24-27 were rejected under 35 USC §102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0013441 by Bhogal et al. ("Bhogal");

claims 2, 6, 8, 14, and 19 were rejected under 35 USC §103(a) as being unpatentable over Bhogal in view of U.S. Patent No. 5,677,945 to Mullins et al. ("Mullins"); and

claims 3, 7, 15, and 20 were rejected under 35 USC §103(a) as being unpatentable over Bhogal in view of Mullins and further in view of U.S. Patent Application Publication No. 2004/0203607 by Satapathy ("Satapathy").

Correction of the Record Is Requested

Page 6 of the detailed Action includes a rejection of **claims 3, 7, 15, and 20** that is based in part on U.S. Patent Application Publication No. 2004/0203607 by Satapathy. However, this document is not included in the Notice of References Cited associated with the subject Office Action. Additionally, the Applicants have reviewed their records and have not found the subject document listed on any other Notice of References Cited or in any Information Disclosure Statement submitted by the Applicants.

Accordingly, inclusion of U.S. Patent Application Publication No. 2004/0203607 by Satapathy on a new Notice of References Cited and correction of the record is respectfully requested.

The Present Application

By way of brief review, the present application is related to network support for automatic credit for dropped calls. That is, elements of a wireless communications service provider's network detect a dropped call and automatically

generate appropriate messages and transmit those messages to appropriate system elements to credit the account of a subscriber in order to compensate for the dropped call. For example, a cell site 318 detects a disruption with, for example, a dropped call detector, and generates a communications interrupted message. The communications interrupted message is transmitted to a Mobile Switching Center 322 (paragraph 37). The mobile switching center extracts information regarding the identity of the subscriber associated with the mobile device and the communications interruption from the communications interrupted message. The MSC 322 uses the extracted information to generate a query or dip 334 into a subscriber database 338 associated with the subscriber using the mobile device. The query 334 requests information regarding preferences of the subscriber related to a desired type of credit. Additionally, the query 334 may request communications interruption history information regarding the subscriber. The subscriber database 338 generates and transmits a query response message including the requested information. The MSC 322 uses the information from the communications interrupted messages and the Query Response Message 342 to generate a Credit Amount Message 346. The Credit Amount Message 346 is transmitted 130 to a Billing Center 350 associated with the subscriber. The Billing Center 350 applies 134 credit to an account of the subscriber according to instructions in the Credit Amount Message 346 (paragraph 38; Fig. 3).

The Cited Documents

In contrast, it is respectfully submitted that the primary reference of the Office Action to Bhogal describes a cellular telephone unit 10 (Fig. 1; paragraph 16) that logs 140 (Fig. 2) calls that are determined 110 to be dropped calls. The log is occasionally transmitted 150. It is respectfully submitted that while Bhogal is concerned with dropped calls, the systems and methods proposed by Bhogal to address dropped calls are different than those disclosed and claimed in the present application. For example, Bhogal does not propose generation and transmission of messages recited in **claim 1** and depicted, for example, in Fig. 3 of the present application (e.g., 330, 334, 342, 346).

It is respectfully submitted that the secondary references do not cure the deficiencies of Bhogal.

For example, Mullins is related to a system and method to provide prepaid

telecommunication services using credit or debit cards in a telecommunication network including a central database. The system monitors card balances while blocking multiple use of card balances and sends warning messages to subscribers on card balances which approach a threshold amount. It is respectfully submitted that Mullins is not concerned with dropped calls and does not disclose or suggest sending messages related to dropped calls or crediting an account because of a dropped call.

Satapathy allegedly discloses a method and system for reactively managing dropped calls in a wireless communication system. A mobile station determines that it has experienced a dropped call. In response, the mobile station allows a user to continue communicating, such as by recording the user's speech. The mobile station may then play out the recorded speech to the user or to another call participant. Even if Satapathy is concerned with dropped calls, Satapathy is not concerned with automatically providing a credit to a subscriber's account based on the dropped call. Therefore, Satapathy does not disclose or suggest generating and transmitting the chain of messages disclosed in the present application (e.g., 330, 334, 342, 346) or the generation and transmission of messages recited, for example, in **claim 1** of the present application.

The Claims Are Not Anticipated

Claims 1, 4, 5, 11, 13, 16, 17, and 24-27 were rejected under 35 USC §102(e) as being anticipated by Bhogal.

In explaining the rejection of **claim 1**, the Office Action also makes reference to **claims 12** and **18**, even though they were not included in the list of claims rejected under 35 USC §102(e) in light of Bhogal and even though the explanation of the rejection makes no reference to the elements recited in **claims 12** and **18**. Clarification is respectfully requested.

With regard to the elements recited in **claim 1**, the Office Action cites paragraph 7 and paragraphs 26-29 in support of the assertion that Bhogal discloses generating a communications interrupted message, transmitting the communications interrupted message, generating a credit account message, transmitting the credit account message to a billing center and applying a credit to the account of the subscriber based on the credit account message.

However, paragraph 7 of Bhogal indicates that an aspect of the method of

Bhogal includes “marking the dropped call”, wherein a call dropped function is activating. Activating the call dropped function may include selecting a menu feature. Activating the call dropped function may include depressing a call drop button. Accordingly, it is respectfully submitted that paragraph 7 describes a **manual operation** wherein a user indicates that a call has been dropped by working through a menu and depressing a call drop button. Accordingly, paragraph 7 is unrelated to a method for automatically providing credit to an account of a communications services subscriber when communications services of the subscriber are interrupted.

The remainder of paragraph 7 describes characteristics of the dropped call that may be included in a log of dropped calls and indicates that the dropped call characteristics may be transmitted to a provider. However, paragraph 7 does not indicate that a “communications interrupted message” is generated or that such a message is transmitted.

Paragraph 26 indicates that the charge strength of the cell phone battery at the time of a dropped call might be included in the log. Paragraph 27 indicates that the unit that caused the call to be dropped might also be identified in the log. Paragraph 28 indicates that the time and date of the incident can be included in the log. Paragraph 29 indicates that **the log** can be transmitted to the cell phone service provider at predetermined intervals, or when the phone or device 10 is not in use. The log can then be evaluated and appropriate reimbursement made by the cell phone service provider.

It is respectfully submitted that paragraphs 26-29 do not disclose or suggest generating a credit account message based on the communications interrupted message, transmitting the credit account message to a billing center and applying a credit to the account of the subscriber based on the credit account message.

Bhogal simply does not disclose or suggest the method disclosed in the present application and recited, for example, in **claim 1**.

For at least the foregoing reasons, **claim 1**, as well as **claims 2-11**, which depend therefrom, is not anticipated by Bhogal.

Although a reference to **claim 18** is included in the discussion of the rejection of **claim 1**, the Office Action does not even assert that Bhogal discloses the means for detecting an interruption, means for generating a communications interrupted message, means for transmitting the communications interrupted message, means for generating a credit account message, means for transmitting the credit account

message and means for applying a credit to the account of the subscriber recited in **claim 18**.

Indeed, even if Bhogal discloses means for detecting a communications interruption, the means of Bhogal (i.e., cellular telephone 10 or some subcomponent thereof) is not the same means for detecting an interruption in communication services disclosed in the present application and recited by reference thereto according to 35 USC §112, sixth paragraph, in **claim 18** of the present application.

Similarly, Bhogal does not disclose or suggest the same means for generating a communications interrupted message, means for transmitting the communications interrupted message, means for generating a credit account message based on the communications interrupted message, means for transmitting the credit account message to a billing center and means for applying a credit to the account of the subscriber based on the credit account message disclosed in the present application and recited (by reference) in **claim 18** of the present application.

For at least the foregoing reasons, **claim 18**, as well as **claims 19-27**, which depend therefrom, is not anticipated by Bhogal.

It is noted that the Office Action includes **claim 12** in the introduction of the discussion of the elements of **claim 1**. However, the Office Action does not even assert that Bhogal discloses the system recited in **claim 12**.

Accordingly, the Office Action has not met its burden of presenting a *prima facie* case of anticipation, and **claim 12**, as well as **claims 13-17**, which depend therefrom, is not anticipated by Bhogal.

Additionally, **claim 12** has been amended to recite that an interruption event processor operative to generate and transmit a credit account message to direct the application of credit to the account of the communications services subscriber based on a description of a communications interruption event involving the subscriber received in a communications interrupted message. Additionally, **claim 12** has been amended to recite a dropped call detector operative to detect a communications interruption event involving user equipment of the subscriber and to provide description of the dropped call event to the interruption event processor in the communications interrupted message.

It is respectfully submitted that even if Bhogal discusses transmitting a log from a cellular telephone, the transmission of that log is not fairly construed as either the transmission of a communications interrupted message or a credit account

message as those terms are used in the present application. However, even if the transmission of that log is construed to be the transmission of a communication interrupted message or the transmission of a credit account message, the transmission of that log cannot be fairly construed as the transmission of both messages. Accordingly, Bhogal cannot be fairly construed as disclosing the interruption event processor recited in **claim 12** and the dropped call detector recited in **claim 12**.

For at least the foregoing reasons, **claim 12**, as well as **claims 13-17**, which depend therefrom, is not anticipated by Bhogal.

With regard to **claim 5**, the Office Action asserts that paragraphs 20 and 21 of Bhogal disclose detecting the interruption in the communications services of the subscriber at a cell site serving the user equipment of the subscriber. It is respectfully submitted that this is a **clear error of fact**.

The detection of the interruption in communications in Bhogal is performed by cellular telephone unit 10. For example, paragraph 21 clearly indicates that "In the event the call is terminated unintentionally, a determination is made that the call is a dropped call (block 110). This can occur when **the unit 10** detects a time out condition or stops receiving a signal for a predetermined time without receiving a hang up sequence or protocol." Paragraph 16 makes it quite clear that the unit 10 is a cellular telephone unit and not a cell site.

For at least the foregoing additional reasons, **claim 5** is not anticipated by Bhogal, and the rejection of **claim 5** is based on **clear errors of fact**.

With regard to **claim 11**, the Office Action indicates that paragraphs 5, 26 and 28 support the assertion that Bhogal discloses determining a credit type preference of the subscriber and applying a credit to the account of the subscriber based on the determined credit type preference.

However, paragraph 5 simply asserts that it would be desirable to provide a method to conveniently obtain credit or reimbursements for dropped calls or interruptions in wireless communications services. Paragraph 26 indicates that if a call was dropped because the cell phone battery was discharged, a credit might not be provided because an uncharged battery condition would not be the fault of the wireless services provider. Paragraph 28 indicates that a customer might be reimbursed according to either off-peak or peak minutes depending on the time of day of the dropped call.

It is respectfully submitted that the cited portions of Bhogal do not disclose or suggest determining a credit type preference of the subscriber and applying a credit to the account of the subscriber based on the determined credit type as is recited in **claim 11**. Discussion of the subject matter of **claim 11** can be found, for example, at page 8, lines 17-33, of the present application.

For at least the foregoing additional reasons, **claim 11** is not anticipated by Bhogal, and the rejection of **claim 11** is based on clear errors of fact.

With regard to **claim 13**, the Office Action asserts that paragraph 29 supports the assertion that Bhogal discloses a subscriber database including a record indicating a credit type preference of the subscriber wherein the interruption event processor is operative to read the record indicating the credit type preference of the subscriber and direct the application of a credit according to the read preference.

However, paragraph 29 refers to a local database existing in the memory of the telephone unit 10 in which the dropped call communication log may be stored. This is the only database referred to in paragraph 29, and this dropped call log database is not a subscriber database. Furthermore, Bhogal does not disclose that the dropped call log includes a credit type preference, that an interruption event processor reads the dropped call log to determine a credit type preference or that an interruption event processor directs the application of a credit according to such a read preference.

For at least the foregoing additional reasons, **claim 13** is not anticipated by Bhogal. And the rejection of **claim 13** is based on clear errors of fact.

Regarding **claim 17**, the Office Action points vaguely to paragraphs 26-29 with regard to the assertion that Bhogal discloses that the interruption event processor is further operative to calculate a credit amount based on information received in the description of the dropped calls and information received from a subscriber record associated with the subscriber.

However, paragraph 26 indicates that the dropped call log can include a charge strength of the cell phone battery and is silent with regard to a subscriber record.

Paragraph 27 indicates that the dropped call log can include an identification of the unit that caused the call to be dropped. Paragraph 27 is silent with regard to a subscriber record.

Paragraph 28 indicates that the time of the call may be included in the log.

Paragraph 28 is silent with regard to a subscriber record.

Paragraph 29 indicates that the log can be transmitted to a cell phone service provider.

It is respectfully submitted that -- subscriber record -- is a term of art used to refer to a record containing information about a subscriber and a subscriber's account and subscription included in the subscriber database (e.g., 338 of Fig. 3) and one of ordinary skill in the art would understand that the call record log of Bhogal is not a subscriber database or a subscriber record thereof.

For at least the foregoing additional reasons, **claim 17** is not anticipated by Bhogal, and the rejection of **claim 17** is based on clear errors.

With regard to **claim 24**, the Office Action again relies on paragraphs 26-29 to support the assertion that Bhogal teaches means for noting a signal strength from the user equipment of the subscriber, means for comparing the signal strength to a threshold signal strength and means for declaring the communication services of the subscriber interrupted when the signal strength falls below the threshold signal strength. However, as noted above, paragraph 26 indicates that the charge strength of the cell phone battery can be included in the dropped call log. Paragraph 27 indicates that an identification of the unit that caused the call to be dropped could be included in the log. Paragraph 28 indicates that the time of the dropped call could be included in the log, and paragraph 29 indicates that the log can be transmitted to a cell phone service provider at predetermined intervals or when the phone or device 10 is not in use.

Nothing in paragraphs 26-29 discloses a means for noting a signal strength. Moreover, since in the system of Bhogal the cell phone detects the dropped call, nothing in Bhogal discloses or suggests detecting a signal strength from the user equipment of the subscriber.

Moreover, even if Bhogal could be construed as disclosing noting a signal strength from the user equipment of the subscriber, Bhogal does not disclose the same means disclosed in the present application (e.g., a cell site 318; see page 8, lines 7-16).

Bhogal discusses a cellular telephone unit 10 detecting dropped calls. Bhogal does not disclose or suggest a cell site detecting dropped calls.

For at least the foregoing reasons, **claim 24** is not anticipated by Bhogal, and the rejection of **claim 24** is based on clear errors of fact.

With regard to **claim 25**, the Office Action again relies on paragraphs 26-29 and makes similar assertions to those made with regard to **claim 24**. In this regard, arguments similar to those submitted in support of **claim 24** are submitted in support of **claim 25**. Even if Bhogal could be construed as disclosing some means for performing the functions recited in **claim 25**, Bhogal clearly does not disclose the same means disclosed in the present application and recited by reference according to 35 USC §112, sixth paragraph, in **claim 25**.

For at least the foregoing reasons, **claim 25** is not anticipated by Bhogal, and the rejection of **claim 25** is based on **clear errors of fact**.

With regard to **claim 26**, the Office Action again relies on paragraphs 26-29 and makes assertions similar to those submitted with regard to **claim 24**. In this regard, arguments similar to those submitted in support of **claim 24** are submitted in support of **claim 26**. Furthermore, it is respectfully submitted that Bhogal does not disclose means for declaring the communications services of the subscriber interrupted when the signal strength falls below a threshold signal strength with at least a predetermined frequency. Clarification of this assertion is respectfully requested.

For at least the foregoing reasons, **claim 26** is not anticipated by Bhogal, and the rejection of **claim 26** is based on **clear errors of fact**.

The Claims Are Not Obvious

Claims 2, 6, 8, 14 and 19 were rejected under 35 USC §103(a) as being unpatentable over Bhogal in view of Mullins.

The Office Action stipulates that Bhogal does not disclose the subject matter of **claim 2** and relies on Mullins for disclosure of this subject matter. However, even if Mullins discloses sending messages to subscribers on card balances which approach a threshold amount, this does not disclose or suggest generating a subscriber notification message describing a credit and transmitting the subscriber notification message to the user equipment of the subscriber wherein the system detects an interruption in communication and the system determines that a credit application is appropriate and applies the credit.

Furthermore, there is no motivation in the art to combine the messages of Mullins with the subject matter of Bhogal to arrive at the subject matter of **claim 2**. In the system of Bhogal, it is the subscriber's telephone that detects and logs a

dropped call. Presumably, the dropped call detection algorithm is approved by the wireless service provider. Accordingly, there is no doubt in the mind of the subscriber that a credit for the logged calls will be applied. Therefore, there is no need to notify the subscriber that a credit has been applied.

On the other hand, according to the systems and methods of the present application, since the system (not the subscriber's phone) detects the dropped call, it is appropriate for the system to notify the subscriber that the system recognizes that the call has been dropped and that a credit has been applied to the subscriber's account in an effort to immediately alleviate the subscriber's frustration with having had a call dropped.

Additionally, Bhogal is not related to a prepaid telecommunications service. Accordingly, the motivation suggested by the Office Action for making the combination, i.e., "in order to announce caller the remaining amount of money available to him and improve the performance of the telecommunications system", is specious. There is no "remaining amount of money" available to the user of Bhogal since the system of Bhogal is not related to a prepaid account.

Accordingly, the only motivation for making the applied combination is that found in information gleaned only from the present application, and the rejection of **claim 2** is based on impermissible hindsight reasoning.

For at least the foregoing reasons, **claim 2** is not anticipated and is not obvious in light of Bhogal and Mullins.

Regarding **claim 8**, the Office Action stipulates that Bhogal does not disclose generating a call data record applying credit to the account of the subscriber. The Office Action relies on Mullins for this disclosure. In this regard, the Office Action cites paragraphs 13 and 14 of Mullins. However, the paragraphs of Mullins are not numbered. Accordingly, the citation of the Office Action is not clear. Nevertheless, the Applicants have reviewed Mullins and believe the referenced paragraphs 13-14 is meant to be a reference to subject matter from column 2, somewhere between lines 23-50, depending on whether certain of the subheadings are counted as paragraphs.

In any event, it is respectfully submitted that nothing in column 2 of Mullins discloses or suggests generating a call data record applying credit to the account of a subscriber. Column 2, line 36, refers to means to update the balance in the central database and change status flag upon completion of the call. However, it is

respectfully submitted that this is a reference to debiting the account balance and not a reference to applying a credit. Moreover, Mullins does not disclose or suggest that this balance update is achieved through the generation of a call data record or that a call data record can be used to apply a credit to the account of a subscriber. Accordingly, Mullins does not include the subject matter for which it is relied. Therefore, there can be no motivation for combining subject matter from Mullins with subject matter from Bhogal to arrive at the subject matter recited in **claim 8**, and the Office has not met its burden of presenting a *prima facie* case of obviousness.

For at least the foregoing reasons, **claim 8** is not anticipated and is not obvious in light of Bhogal and Mullins.

Claims 9 and 10 were rejected for the reasons set forth in the rejection of **claim 8**. Accordingly, arguments similar to those submitted in support of **claim 8** are submitted in support of **claims 9 and 10**. Accordingly, **claims 9 and 10** are not anticipated and are not obvious in light of Bhogal and Mullins.

Claims 3, 7, 15, and 20 were rejected under 35 USC §103(a) as being unpatentable over Bhogal in view of Mullins and further in view of Satapathy.

In this regard, the Office Action stipulates that Bhogal and Mullins do not disclose storing a generated subscriber notification until communications services are reestablished with the user equipment of the subscriber. Accordingly, the Office Action relies on Satapathy. However, even if Satapathy discloses recording the user's speech and playing the recorded speech upon reestablishment of a call, this does not disclose or suggest recording a notification regarding the application of a credit to compensate for a dropped call as is recited in **claim 3** or means therefor as recited in **claims 15 and 20**. Furthermore, as indicated above, there is no need to send such message to the phone of Bhogal since it is the phone of Bhogal that detects dropped calls. Since the phone of the subscriber of Bhogal detects the dropped calls and generates the log, presumably in accordance with the approval and cooperation of the wireless service provider, there is no need to notify the subscriber that a credit is being applied. Therefore, there is no motivation in the art to combine subject matter from Satapathy with subject matter from Bhogal and Mullins. The motivation suggested by the Office Action "in order to allow participants in dropped calls to continue communicating and play the recorded communications upon reestablishment of the call" is something achieved by Satapathy on its own. Accordingly, it does not provide motivation for combining subject matter from

Satapathy into the system of Bhogal.

For at least the foregoing reasons, **claims 3, 15 and 20** are not anticipated and are not obvious in light of Bhogal, Mullins and Satapathy.

Furthermore, **claim 7** recites transmitting the communications interrupted message from the cell site to the mobile switching center serving the user equipment of the subscriber. It is respectfully submitted that Bhogal, Mullins and Satapathy do not disclose or suggest transmitting a communications interrupted message from a cell site to a mobile switching center. Clarification of the rejection of **claim 7** is respectfully requested.

For at least the foregoing reasons, **claim 7** is not anticipated and is not obvious in light of Bhogal, Mullins and Satapathy.

Telephone Interview

In the interests of advancing this application to issue, the Applicants respectfully request the Examiner telephone the undersigned to discuss the foregoing or any suggestions the Examiner might have to place the case in condition for allowance.

CONCLUSION

Claims 1-27 remain in the application. **Claims 1, 13 and 18** have been amended to correct antecedents. **Claim 12** has been amended in keeping with the subject matter from **claims 1 and 18**. The amendments to the claims should not require a new search. For at least the foregoing reasons, **claims 1-27** are in condition for allowance. Accordingly, an early indication thereof is respectfully requested.

Respectfully submitted,

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November 14, 2007
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Under 37 C.F.R. § 1.8, I certify that this Amendment is being

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